

SECTION 10265 - IMPACT-RESISTANT WALL PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wall guards.
 - 2. Impact-resistant handrails.
 - 3. Bed locators.
 - 4. Corner guards.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance of Handrails: Provide handrails capable of withstanding the following structural loads without exceeding the allowable design working stress of materials for handrails, anchors, and connections:
 - 1. Concentrated load of 200 lbf (890 N) applied at any point and in any direction.
 - 2. Uniform load of 50 lbf/ft. (730 N/m) applied in any direction.

1.4 SUBMITTALS

- A. Product Data: Include construction details, material description, impact strength, fire-test-response characteristics, dimensions of individual components and profiles, and finishes for each impact-resistant wall-protection unit.
- B. Shop Drawings: For each impact-resistant wall-protection unit showing locations and extent. Include sections, details, and attachments to other work.
- C. Samples for Initial Selection: For each type of impact-resistant wall-protection unit indicated.
- D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
 - 1. Wall and Corner Guards: 12 inches (300 mm) long. Include examples of joinery, corners, end caps, top caps, and field splices.
 - 2. Handrails: 12 inches (300 mm) long. Include examples of joinery, corners, and field splices.
- E. Maintenance Data: For each impact-resistant wall-protection unit to include in maintenance manuals.
 - 1. Include recommended methods and frequency of maintenance for maintaining optimum condition of plastic covers under anticipated traffic and use conditions. Include precautions against using cleaning materials and methods that may be detrimental to plastic finishes and performance.
- F. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain impact-resistant wall-protection units through one source from a single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of impact-resistant wall-protection units and are based on the specific system indicated. Refer to Division 1 Section "Product Requirements."
 - 1. Do not modify intended aesthetic effects.
- D. Fire-Test-Response Characteristics: Provide impact-resistant, plastic wall-protection units with surface-burning characteristics as determined by testing identical products per ASTM E 84, NFPA 255, or UL 723 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store impact-resistant wall-protection units in original undamaged packages and containers inside well-ventilated area protected from weather, moisture, soiling, extreme temperatures, and humidity.
 - 1. Maintain room temperature within storage area at not less than 70 deg F (21 deg C) during the period plastic materials are stored.
 - 2. Keep material out of direct sunlight.
 - 3. Store plastic wall-protection components for a minimum of 72 hours, or until plastic material attains a minimum room temperature of 70 deg F (21 deg C).
 - a. Store corner-guard covers in a vertical position.
 - b. Store wall-guard, bed-locator, and handrail covers in a horizontal position.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install impact-resistant wall-protection units until building is enclosed and weatherproof, wet work is complete and dry, and HVAC system is operating and maintaining temperature at 70 deg F (21 deg C) for not less than 72 hours before beginning installation and for the remainder of the construction period.
- B. Field Measurements: Verify actual locations of walls, columns, and other construction contiguous with impact-resistant wall-protection units by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of impact-resistant wall-protection units that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures.
 - b. Deterioration of plastic and other materials beyond normal use.
 - 2. Warranty Period: Five years from date of Beneficial Occupancy.

1.9 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Wall-Guard and Handrail Covers: Full-size plastic covers of maximum length equal to 2 percent of each type, color, and texture of units installed, but no fewer than two, 8-foot- (2.4-m-) long units.
 - 2. Bed-Locator Covers: Full-size plastic covers equal to 2 percent of each type, color, and texture of units installed, but no fewer than 2 units.
 - 3. Corner-Guard Covers: Full-size plastic covers of maximum length equal to 2 percent of each type, color, and texture of units installed, but no fewer than two, 4-foot- (1.2-m-) long units.
- B. Include mounting and accessory components. Replacement materials shall be from same production run as installed units.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
 - 2. Basis-of-Design Product: The design for each impact-resistant wall-protection unit is based on the product named. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

2.2 MATERIALS

- A. Extruded Rigid Plastic: ASTM D 1784, Class 1, textured, chemical- and stain-resistant, high-impact-resistant acrylic-modified vinyl plastic with integral color throughout; thickness as indicated.
 - 1. Impact Resistance: Minimum 25.4 ft-lbf/in. (1356 J/m) of notch when tested according to ASTM D 256, Test Method A.
 - 2. Chemical and Stain Resistance: Tested according to ASTM D 543.
 - 3. Self-extinguishing when tested according to ASTM D 635.
 - 4. Flame-Spread Index: 25 or less.
 - 5. Smoke-Developed Index: 450 or less.
- B. Aluminum Extrusions: Alloy and temper recommended by manufacturer for type of use and finish indicated but with not less than strength and durability properties specified in ASTM B 221 (ASTM B 221M) for Alloy 6063-T5.
- C. Stainless-Steel Sheet: ASTM A 240/A 240M.
- D. Fasteners: Aluminum, nonmagnetic stainless steel, or other non-corrosive metal screws, bolts, and other fasteners compatible with items being fastened. Use security-type fasteners where exposed to view.
- E. Adhesive: Type recommended by manufacturer for use with material being adhered to substrate indicated.

2.3 WALL GUARDS

- A. Crash Rail WG-1: Heavy-duty assembly consisting of continuous snap-on plastic cover installed over continuous retainer; with continuous rubber or vinyl bumper cushion(s) centered in the retainer; designed to withstand impacts.
 - 1. Basis-of-Design Product: Acrovyn Crash Rail SCR-48 or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Balco, Inc.
 - c. Construction Specialties, Inc.
 - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
- B. Wood Chair Rail with Bumper WG-2: Assembly consisting of continuous sculpted, solid-wood rail, with bumper insert installed over continuous recessed retainer.
 - 1. Basis-of-Design Product: Acrovyn Renaissance Chair Rail AW-CRVB or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Construction Specialties, Inc.
 - c. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - 2. Wood Rail:
 - a. Wood Species: Red oak.
 - b. Finish: Clear.
 - c. Mounting: Surface mounted directly to wall.
 - 3. Bumper: Extruded flexible vinyl.
 - a. Color and Texture: As selected from manufacturer's full range.

2.4 HANDRAILS

- A. Impact-Resistant Plastic Handrails HR: Assembly consisting of snap-on plastic cover installed over continuous retainer.
 - 1. Basis-of-Design Product: Acrovyn Handrail HRB-4C or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Balco, Inc.
 - c. Construction Specialties, Inc.
 - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 - 2. End Caps and Corners: Prefabricated, injection-molded plastic; color matching cover; field adjustable for close alignment with snap-on cover.

2.5 BED LOCATORS

- A. Bed Locators/Bed Docker BL: Assembly consisting of continuous snap-on plastic cover installed over continuous retainer; with two bed-locator end caps, two 4-plex electrical outlets, two duplex electrical outlets, one single electrical receptacle, night light, telephone outlet, multi-pin bed receptacle Hill-Rom side-com 376, and mounting hardware; cover designed to spring back when hit.
 - 1. Basis-of-Design Product: Modular Services Company Bed Docker or a comparable product by one of the following:
 - a. Skytron.

2.6 CORNER GUARDS

- A. Flush-Mounted, Resilient, Plastic Corner Guards CG1: Assembly consisting of snap-on plastic cover that is flush with adjacent wall surface, installed over continuous retainer; including mounting hardware; fabricated with 90- or 135-degree turn to match wall condition; full wall height.
1. Basis-of-Design Product: Acrovyn Flush Mounted Corner Guard FS-10 or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Balco, Inc.
 - c. Construction Specialties, Inc.
 - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 2. Base: Fabricate with stainless steel cover on snap-on aluminum base for alignment with adjacent resilient base.
- B. Fire-Rated, Resilient, Plastic Corner Guards CG2: Assembly consisting of snap-on plastic cover that is flush with adjacent wall surface, installed over continuous retainer and intumescent fire barrier; including mounting hardware; fabricated with 90- or 135-degree turn to match wall condition; full wall height.
1. Basis-of-Design Product: Acrovyn Fire Rated Corner Guard FS-10R 1HR and 2 HR or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Balco, Inc.
 - c. Construction Specialties, Inc.
 - d. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 2. Fire Rating: Same rating as wall in which corner guard is installed; UL listed and labeled according to UL 2079.
 3. Base: Fabricate with stainless steel cover on snap-on aluminum base for alignment with adjacent resilient base.
- C. Surface-Mounted, Metal Corner Guards M: Fabricated from 1-piece, formed or extruded metal with formed edges; with 90- or 135-degree turn to match wall condition.
1. Basis-of-Design Product: C/S Group CO-8 or a comparable product by one of the following:
 - a. ARDEN Architectural Specialties, Inc.
 - b. Balco, Inc.
 - c. Boston Retail Products.
 - d. Construction Specialties, Inc.
 - e. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 2. Material: Stainless steel, Type 304.
 - a. Thickness: Minimum 0.0625 inch (1.6 mm).
 - b. Finish: Directional satin, No. 4.

2.7 END-WALL GUARDS

- A. Flush-Mounted, Resilient, Plastic End-Wall Guard CG3: Assembly consisting of snap-on plastic cover that is flush with adjacent wall surface and that covers entire end of wall, installed over continuous retainer; including mounting hardware.
1. Basis-of-Design Product: Acrovyn Flush Mounted Corner Guard FSC-25 or a comparable product by one of the following:
 - a. Balco, Inc.
 - b. Construction Specialties, Inc.
 - c. IPC Door and Wall Protection Systems; Division of InPro Corporation.
 2. Base: Fabricate with stainless steel cover on snap-on aluminum base for alignment with adjacent resilient base.

2.8 FABRICATION

- A. Fabricate impact-resistant wall-protection units to comply with requirements indicated for design, dimensions, and member sizes, including thickness of components.

2.9 METAL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
 - 1. Remove tool and die marks and stretch lines or blend into finish.
 - 2. Grind and polish surfaces to produce uniform, directionally textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- C. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and wall areas, with Installer present, for compliance with requirements for installation tolerances, fire rating, and other conditions affecting performance of work.
 - 1. Examine walls to which impact-resistant wall protection will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.
 - 2. For impact-resistant wall-protection units attached with adhesive or foam tape, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Complete finishing operations, including painting, before installing impact-resistant wall-protection system components.
- B. Before installation, clean substrate to remove dust, debris, and loose particles.

3.3 INSTALLATION

- A. General: Install impact-resistant wall-protection units level, plumb, and true to line without distortions. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
 - 1. Install impact-resistant wall-protection units in locations and at mounting heights indicated on Drawings or, if not indicated, at heights indicated below:
 - a. Wall Guards: Three feet to the centerline above finished floor.
 - b. Handrails: Three feet to the top above finished floor.
 - c. Bed Locators: 7-5/8 inches to the bottom above finished floor.

2. Provide splices, mounting hardware, anchors, and other accessories required for a complete installation.
 - a. Provide anchoring devices to withstand imposed loads.
 - b. Where splices occur in horizontal runs of more than 20 feet (6 meters), splice aluminum retainers and plastic covers at different locations along the run, but no closer than 12 inches (300 mm).
 - c. Adjust end and top caps as required to ensure tight seams.

B. Wood Handrails: Miter corners and ends for returns.

C. Impact-Resistant Wall Covering: Provide top and edge moldings, corners, and divider bars as required for a complete installation.

3.4 CLEANING

- A. Immediately after completion of installation, clean plastic covers and accessories using a standard, ammonia-based, household cleaning agent.
- B. Remove excess adhesive using methods and materials recommended in writing by manufacturer.

END OF SECTION 10265